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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,219	11/09/2001	James B. Goddard	AES 107 P2	5658

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EXAMINER

COLLINS, GIOVANNA M

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/037,219	Applicant(s) GODDARD ET AL.	
	Examiner Giovanna M. Collins	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 25 is/are allowed.
- 6) ☒ Claim(s) 18-24 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goddard ('209) in view of Webb et al. 4,971,477.

Goddard discloses in a corrugated pipe comprising two sections joined by telescopically mating a male end of one section with a female end of the other section, the improvement comprising an annular sealing element (60) fixed to the exterior surface of the male end and disposed to sealingly engage the interior surface of the female end; Goddard does not disclose an annular band of reinforcing material disposed around the exterior surface that is in general alignment with the sealing element. Webb teaches (see Fig. 8) placing an annular band (98) of reinforcing material around an exterior surface that is in general alignment with a sealing element (97) where the reinforcing element has a width no substantially greater than a single corrugation. Webb teaches the annular band helps the sealing element maintain sealing engagement with two surfaces (see col. 7, lines 28-31). As it would be advantageous to maintain sealing engagement between the two pipe sections it would be obvious to one

of ordinary skill in the art to modify the pipe disclosed by Goddard to have the annular reinforcing band as taught by Webb.

Referring to claim 19, Goddard discloses wherein the annular sealing element (60) is disposed in an annular channel in the outer surface of the male end.

Referring to claim 20, Goddard discloses wherein each section includes opposed male and female ends (18,20) and the outside pipe diameter of each section between its respective male and female ends is substantially the same.

Referring to claim 21, Goddard discloses wherein the outside diameter of the female end (20) of each section is substantially the same as the outside pipe diameter.

Referring to claim 22, Goddard discloses wherein the male end includes at least two corrugations (32,42) comprising at least two axially spaced, annular crests and an annular valley therebetween, the two crests defining the outside diameter of the male end, and wherein the annular channel (55) is formed in one of the crests.

Referring to claim 23, Goddard discloses wherein the outside diameter of the male end (18) is selected to permit mating and sealing engagement with the female end (20).

2. Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goddard ('209) in view of Webb ('897) as applied to claim 22 above, and further in view of European Patent EP595742 to Courant.

Goddard, as modified, does not disclose an intermediate corrugation that has an outside diameter greater than the outside diameter of the male end. Courant teaches

Art Unit: 3672

(see Fig. 10) a pipe having an intermediate corrugation (23a) that has an outside diameter greater than the outside diameter of a male end. Courant teaches the larger diameter of the intermediate corrugation allows the intermediate to have better engagement with the female end of a second pipe (see Fig. 11). As it would be advantageous for the two pipes being connected to have a good engagement with each other, it would be obvious to one of ordinary skill in the art to further modify the pipe disclosed by Goddard to have an intermediate corrugation that has an outside diameter greater than the outside diameter of the male end as taught by Courant.

3. Claims 27, 28, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goddard ('209) in view of Kutschke 4,049,480.

Goddard discloses a corrugated pipe comprising an annular sealing element fixed to the exterior surface of the male end and disposed to sealingly engage the interior surface of the female end. Goddard does not teach an annular band of tape. Kutschke teaches an annular band of tape disposed around the female end of a pipe to prevent the pipe from expanding outwardly and resist loss of sealing engagement. Kutschke further the tapes helps to completely seal off the female end (col. 4, lines 14-20). As it would be advantageous to completely seal off the female end, in case the seal becomes damaged, it would be obvious to one of ordinary skill in the art to modify the pipe disclosed by Goddard to have the tape as taught by Kutschke.

Referring to claim 27, Goddard discloses wherein the male end also includes a second corrugation (32) that can be accommodated in the female end.

Referring to claim 28, Goddard discloses wherein the female end (20) includes a distal end into which the male end is inserted, and a third corrugation (42) with a crest that extends radially outwardly at least as far as the distal end of the female end.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goddard ('209) in view of Kesterman et al. 6,371,154.

Goddard discloses a corrugated pipe for accommodating fluid flow, the pipe consisting of a material that deforms in response to internal water pressure and including two sections joined by telescopically mating a male end of one section with a female end of the other section, the improvement comprising an annular sealing element (60) fixed to the exterior surface of the male end and disposed to sealingly engage the interior surface of the female end. Goddard does not disclose an annular reinforcement disposed around the exterior surface of the female end, the annular reinforcement having a width that is greater than the width of the sealing element and is disposed substantially upstream from the sealing element to resist loss of sealing engagement between the female end and the sealing element during use of the pipe. Kesterman teaches (see Fig. 6a) placing an annular band (100) of reinforcing material around an exterior surface having a width greater than the width of a sealing element (104) but not substantially greater than a single corrugation. The annular band helps the sealing element maintain sealing engagement with two surfaces. As it would be advantageous to maintain sealing engagement between the two pipe sections it would

Art Unit: 3672

be obvious to one of ordinary skill in the art to modify the pipe disclosed by Goddard to have the annular reinforcing band as taught by Kesterman.

Allowable Subject Matter

Claim 25 is allowed.

Response to Arguments

Applicant's arguments with respect to claims 18-24, 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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David Bagnell
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